2005 - 2010 TEXAS STATE HEALTH PLAN

Innovative Approaches to Health Workforce Planning for Texas —





Office of the Governor

RICK PERRY GOVERNOR

October 6, 2004

Ben G. Raimer, M.D. Chair Texas Statewide Health Coordinating Council 1100 West 49th Street Austin, Texas 78756-3199

Dear Dr. Raimer:

Thank you and all of the members of the Statewide Health Coordinating Council (SHCC), for all of the hard work that went into the preparation of the 2005-2010 Texas State Health Plan entitled "Innovative Approaches to Health Workforce Planning in Texas." This report is a thorough, useful guide for coordinating efforts among the many state agencies and stakeholders who work with our health care system to maintain and improve our health care workforce.

This guide will help build on existing measures that have already been implemented. During the last legislative session, I was proud to sign HB 3126, a comprehensive measure to address the nursing shortage by increasing nursing school enrollments, creating a permanent Nursing Workforce Data Center and adding to the SHCC a member dedicated to the nursing profession. Additionally, SB 718 addresses a variety of steps that Texas can take to enhance the nursing workplace.

The council's recommendations will help to ensure that all Texans have equal access to quality health care. I applaud the SHCC's focus on our vital nursing workforce.

Each of us has a role in our health care system, whether as consumers, patients, providers, or policymakers. Working together in a coordinated fashion ensures efficient and effective use of our resources. SHCC's report will help us go a long way toward building a healthy Texas.

Sincerely,

Rick Perry Governor

RP:vfg

STATEMENT OF THE CHAIRMAN

The 1999-2004 Texas State Health Plan, the state's fundamental health workforce-planning document, developed by the Texas Statewide Health Coordinating Council (SHCC) in 1998, envisioned a Texas in which all citizens were able to achieve their maximum health potential. However, six years later, due to a myriad of factors and circumstances, Texas continues to be challenged to meet its current health care workforce needs and the anticipated needs for future generations.

As the SHCC considered the approach it would take in developing the 2005-2010 Texas State Health Plan, the members felt that it was necessary to consider a different approach. Rather than continue to look only at the health workforce that would be required to fulfill the requirements of the current traditional medical model, the SHCC chose to consider innovative delivery models and the mix of health professionals that would be required to ensure a quality health workforce under a non-traditional delivery model.

The SHCC conducted an extensive assessment of health workforce issues. Additionally, in March 2004, the SHCC once again hosted the Texas Statewide Health Workforce Symposium. The Symposium provided a forum for health workforce stakeholders to come together to discuss the most critical workforce issues and to entertain possible solutions. Both the result of the literature review and the Symposium support the need for fundamental system change within the health care delivery system and the policy environment that shapes it. Consequently, the 2005-2010 Texas State Health Plan focuses on innovative approaches to the recruitment and retention, the education and training, and the regulation of the Texas health care workforce.

We are committed to the belief that a healthy Texas can be a productive Texas and envision a Texas in which each person enjoys optimal health status, is informed, and is productive. We believe that the recommendations included in the 2005-2010 Texas State Health Plan place Texas on the right track in preparing our state for its future.



Ben G. Raimer, M.D., Chairman

Texas Statewide Health Coordinating Council

STATEWIDE HEALTH COORDINATING COUNCIL A VISION

We envision a Texas in which all are able to achieve their maximum health potential - A Texas in which:

- Prevention and education are the primary approaches for \star achieving optimal health.
- All have equal access to quality health care. *
- Local communities are empowered to plan and direct interventions that have the greatest impact on the health of all.
- We, and future generations, are healthy, productive and able to make informed decisions.

A Healthy Texas is a Productive Texas

TEXAS STATE HEALTH PLAN TEXAS STATEWIDE HEALTH COORDINATING COUNCIL

November 2004

Name/City Representing

Officers:

Ben G. Raimer, M.D. University Representative

Chair, Galveston

James A. Endicott, Jr., J.D. Public Member

1st Vice Chair, Harker Heights

David A. Valdez, M.D. **HMO** Representative

2nd Vice Chair, San Antonio

Susan M. Scott-Galindo, M.Ed., CCC/SLP Health Care Professional

Secretary, Bryan

Russell K. Tolman, M.B.A. Hospital Representative

Parliamentarian, Fort Worth

Members:

Joan Wood Biggerstaff Public Member

Plano

Texas Health and Human Nora Cox, B.A.

Sevices Commission Austin

Rick Danko, Dr. P.H. Texas Department of State Health Services Austin

Health Care Professional Karl Alonzo Floyd, M.Ed., ABMPP

Stafford

Janie Martinez Gonzalez, B.A. Public Member

San Antonio

Elva Concha LeBlanc, Ph.D. Community College Representative

Galveston

Jimmie Lee Mason, C.P.A. Public Member

Lubbock

Thalia H. Munoz, R.N., M.S. Nurse

Rio Grande City

Texas Higher Education Stacey Silverman, M.A.

Coordinating Board Austin

Richard Madsen Smith, D.D.S. Health Care Professional

Amarillo

Patricia L. Starck, D.S.N., R.N. University Representative

Houston

Vacant Texas Department of Mental

Health and Mental Retardation

STAFF SUPPORTING THE STATEWIDE HEALTH COORDINATING COUNCIL

Center for Health Statistics Texas Department of State Health Services

Mike Gilliam, Jr., M.P.H., M.S.W. Director, Center for Health Statistics Connie Turney, B.S., N.F.A. SHCC Project Director, Primary Author Bruce Gunn, Ph.D. Manager, Health Provider Resources Center Aileen K. Kishi, Ph.D., R.N. Program Specialist, Team Leader, NWDS Brian King, B.A. Program Specialist, Team Leader, HPRC

Other staff in the Texas Department of State Health Services who contributed to this plan:

Sandy Tesch, RDH, MSHP Project Coordinator, Publishing Promotional and Media Services Lindsey Eck, A.L.M., A.M. Editor, Publishing Promotional and Media Services Joyce Leatherwood Editor, Publishing Promotional and Media Services Irma R. Choate Graphic Designer, Publishing Promotional and Media Services

295AchezMJ

EDUARDO J. SANCHEZ, M.D., M.P.H.

Commissioner of Health Co-Chair, Texas State Strategic Health Partnership

TABLE OF CONTENTS

FOREWORD xvii
INTRODUCTION xix
Chapter 1 THE CASE FOR HEALTH WORKFORCE PLANNING IN TEXAS
Introduction3
Section I - Status of Priority Issues Included in the 2003-2004 Texas State Health Plan Update
Section II – Identification and Prioritization of Current Health Workforce Issues
Section III - 2005-2010 Texas State Health Plan Recommendations23
Chapter 2 STATUS OF THE HEALTH WORKFORCE IN TEXAS
Introduction33
Supply and Trend Studies38
Appendix A NURSING INNOVATION PROJECTS WHITE PAPERS73
Appendix B PRIMARY CARE MODELS WHITE PAPERS105
Appendix C HEALTH WORKFORCE DATA
Appendix D 78 TH REGULAR LEGISLATIVE SESSION BILL TRACKING169
Appendix E AD HOC COMMITTEE ON HEALTH PERSONNEL DATE181
Appendix F PUBLIC COMMENTS AND SHCC RESPONSE203
WORKING BIBLIOGRAPHY B1

LIST of Figures

Figure 1.1:	Vocational Nursing Programs in Texas: Trends in Qualified Applicants, Admissions, Graduates & Attrition 2003 and 200210
Figure 1.2:	Five-Year Enrollment Trend in Texas RN Programs 1999–200311
Figure 1.3:	Five-Year Graduation Trend in Texas RN Programs 1999–200312
Figure 1.4:	Comparison of Total Enrollment and Graduation Trends, 1999–200313
Figure 1.5:	Associate Degree Nursing Programs in Texas
Figure 1.6:	Baccalaureate Nursing Programs in Texas
Figure 2.1:	Border and Metropolitan Counties in Texas, 200335
Figure 2.2:	DPC Physicians per 100,000 Population: U.S. and Texas, 1981 to 200337
Figure 2.3:	PC Physicians per 100,000 Population: U.S. and Texas, 1981–200339
Figure 2.4:	Internal Medicine Physicians per 100,000 Population, U.S. and Texas, 1981–2003
Figure 2.5:	Family Practice (FP) Physicians per 100,000 Population, U.S. and Texas, 1981–2003
Figure 2.6:	Pediatricians per 100,000 Children (0–18 years), U.S. and Texas, 1985–2003
Figure 2.7:	Ob/Gyn Physicians per 100,000 Females Ages 15–44, Texas, 1985–200344
Figure 2.8:	Physician Assistants per 100,000 Population, U.S. and Texas, 1989–200345
Figure 2.9:	Chiropractors per 100,000 Population, U.S. and Texas, 1980–200347
Figure 2.10:	Podiatrists per 100,000 Population, U.S. and Texas, 1981–200348
Figure 2.11:	Registered Nurses per 100,000 Population, US and Texas, 1986–200349
Figure 2.12:	Nurse Practitioners per 100,000 Population, U.S. and Texas, 1990–200355
Figure 2.13:	Certified Nurse Midwives per 100,000 Females Ages 15–44, U.S. and Texas, 1990 –200356
Figure 2.14:	Certified Registered Nurse Anesthetists per 100,000 Population, Texas, 1990–200357
Figure 2.15:	Clinical Nurse Specialists per 100,000 Population: Texas, 1990-200357
Figure 2.16:	Licensed Vocational Nurses per 100,000 Population: U.S. and Texas, 1981–200358
Figure 2.17:	Dentists per 100,000 Population: U.S. and Texas, 1981–200360
Figure 2.18:	Dental Hygienists per 100,000 Population, U.S. and Texas, 1981–200361
Figure 2.19:	Medical Radiological Technologists per 100,000 Population: U.S. and Texas, 1994–2003
Figure 2.20:	Occupational Therapists per 100,000 Population, U.S. and Texas, 1990–2003

List of figures (continued)

Figure 2.21:	Optometrists per 100,000 Population, U.S. and Texas, 1977–200363
Figure 2.22:	Pharmacists per 100,000 Population, U.S. and Texas, 1978–200364
Figure 2.23:	Physical Therapists per 100,000 Population, U.S. and Texas, 1977–200365
Figure 2.24:	Psychiatrists per 100,000 Population: Texas, 1987–200366
Figure 2.25:	Psychologists per 100,000 Population, U.S. and Texas, 1999–200267
Figure 2.26:	Social Workers per 100,000 Population, Texas, 1993–2003
Figure 2.27:	Licensed Professional Counselors per 100,000 Population, Texas, 1994–2003
Appendix C-1:	DPC Physicians per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1981–2003141
Appendix C-2:	PC Physicians per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1981–2003
Appendix C-3:	Physician Assistants per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1989–2003143
Appendix C-4:	Chiropractors per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1980–2003144
Appendix C-5:	Podiatrists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1981–2003145
Appendix C-6:	Registered Nurses per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1986–2003146
Appendix C-7:	Nurse Practitioners per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1990–2003147
Appendix C-8:	Certified Nurse Midwives per 100,000 Females ages 15–44, Metropolitan and Non-Metropolitan Counties, Texas, 1990–2003
Appendix C-9:	Certified Registered Nurse Anesthetists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1990–2003149
Appendix C-10:	Clinical Nurse Specialists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1990–2003
Appendix C-11:	Licensed Vocational Nurses per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1981–2003
Appendix C-12:	Dentists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1981–2003
Appendix C-13:	Dental Hygienists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1981–2003
Appendix C-14:	Medical Radiologic Technologists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1994–2003154
Appendix C-15:	Occupational Therapists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1991–2003

List of figures (continued)

Appendix C-16:	Optometrists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1977–2003
Appendix C-17:	Pharmacists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1978–2003157
Appendix C-18:	Physical Therapists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1977–2003
Appendix C-19:	Psychiatrists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1999–2003
Appendix C-20:	Psychologists* per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1999–2002
Appendix C-21:	Social Workers per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1993–2003
Appendix C-22:	Licensed Professional Counselors per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1994–2003
Appendix C-23:	Federally Designated Primary Care Health Professional Shortage Areas in Texas, March 2004
Appendix C-24:	Federally Designated Dental Health Professional Shortage Areas in Texas, March 2004
Appendix C-25:	Federally Designated Mental Health Professional Shortage Areas in Texas, March 2004165

LIST OF TABLES

Table 2.1:	PC Physician Ratios for Non-metropolitan, Metropolitan, Border, and Non-border Locations: Texas, 2003
Table 2.2:	PC Physicians by Primary Specialty and Practice Location, Texas, 200340
Table 2.3:	PC Physicians by Primary Specialty and Gender, Texas, 200341
Table 2.4:	Race and Ethnicity Trends for Primary Care Physicians, Texas, 1993 and 200341
Table 2.5:	Distribution of P.A.s by Gender and Race-Ethnicity, Texas, 200346
Table 2.6:	Distribution of actively employed R.N.s in Texas by position type, 200350
Table 2.7:	Distribution of active R.N.s in Texas by their work area, 200351
Table A-1:	Levels of Health Personnel Workforce Studies
Table A-2:	List of 37 Workforce Data Elements in the Minimum Data Set193
Table A-3:	Comparison of Three Scenarios for Collecting Health Care Professions Data in Texas
Table A-4:	MDS fields missing from current state licensing board databases196
Table A-5:	Health Professions by Priority Group for Implementing the MDS199

FOREWORD

The Texas State Health Plan is prepared every six years and updated biennially. The plan serves as a guide to help Texas decision makers formulate appropriate health policies and programs.

The Texas Statewide Health Coordinating Council, a 17-member council with 13 members appointed by the governor and four ex officio members representing specified state agencies, develops the plan. The Texas Health Planning and Development Act, Chapter 104 of the Health and Safety Code, is the enabling legislation for the Statewide Health Coordinating Council. Under the authority of Chapter 104, the governor, with the consent of the senate, appoints council members to staggered six-year terms.

The broad purpose of the Statewide Health Coordinating Council is to ensure that health care services and facilities are available to all Texans through health planning activities. Based on these planning activities, the council makes recommendations to the governor and the legislature through the Texas State Health Plan. The council provides overall guidance in the development of the Texas State Health Plan, submission of the plan to the governor, and promoting the implementation of the plan. The plan is due to the governor for adoption by November 1 of each even-numbered year. Staff in the Center for Health Statistics, with assistance from other program areas at the Texas Department of State Health Services, supports the council's activities.

House Bill 1716 from the 75th Legislature amended Chapter 104 of the Health and Safety Code and focused the council's planning activities on the health professions workforce. The council produced the 1999–2004 Texas State Health Plan: Ensuring a Quality Health Care Workforce for Texas, which was the fundamental plan for the previous six-year planning cycle. The 2001–2002 Texas State Health Plan Update was the first update to that document, while the 2003-2004 Texas State Health Plan Update was the final update.

The 2005–2010 Texas State Health Plan is the initial document and fundamental plan of the next six-year planning cycle and will once again focus on the Texas health workforce. For the purposes of this report, the 2005-2010 Texas State Health Plan is referenced as the State Health Plan.

The State Health Plan outlines Texas' interests in issues concerning the workforce in the health professions. The state is a major provider of medical and health education through its system of publicly funded health science centers, universities, and community and technical colleges. Texas is a major purchaser of health care services through the state's Medicaid program and other public health care programs, as well as a provider of such services through its system of publicly funded medical schools and hospitals. Finally, Texas has the responsibility for the health,

safety, and welfare of its residents. In the State Health Plan, the council develops and presents policy-level recommendations to ensure that Texas has a workforce with the skills, competencies, and abilities to meet the needs of its growing and diverse population.

The State Health Plan will be presented to Governor Rick Perry on October 28, 2004. Copies of the plan will be distributed to state legislators, universities, licensing boards, professional associations, and other interested parties and will be posted on the Web site at http://www.texasshcc.org. The State Health Plan will serve as the state's fundamental document for information on the health professions and workforce planning. The plan includes input from major stakeholders throughout the state, including professional associations, state agencies, employers of health professionals, educators of health professionals, and numerous other public and private entities.

A complete set of the 2005-2010 Texas State Health Plan's recommendations is presented at the end of Chapter 1.

Copies of the 1999-2004 Texas State Health Plan, the 2001-2002 Texas State Health Plan Update, the 2003–2004 Texas State Health Plan Update, and the 2005–2010 Texas State Health Plan can be downloaded from the Web site at http://www.TexasSHCC.org. Printed copies of the documents are also available from the Texas Department of State Health Services, Center for Health Statistics, at a cost of \$20 per copy. To order a document copy, call (512) 458-7261.

Introduction

The workforce policy question the Statewide Health Coordinating Council (SHCC) addressed in the 1999–2004 Texas State Health Plan: Ensuring a Quality Health Care Workforce for Texas is whether or not the current and future supply of health care professionals in Texas will be adequate to meet the current and future needs of the population. The 1999-2004 Texas State Health Plan was the state's fundamental health workforce-planning document incorporating policy, research, and a strategic plan with goals, objectives and strategies for the previous six years. The 2001-2002 Update furthered that strategic plan with new strategies to strengthen the systems that support and ensure a quality health care workforce for Texas. The 2003-2004 Update, the final update to the Texas State Health Plan, continued to build on that strategic plan with additional strategies for those areas that continued to present challenges and for new areas that had surfaced as significant workforce issues during the years since the 2001–2002 Update was published.

In early 2003, as the SHCC began to consider the approach it would take during the next six-year planning cycle, the members felt that it was necessary to take a step back and consider a slightly different approach. Rather than continue to look only at the health workforce that would be required to fulfill the requirements of the current traditional medical model, the SHCC decided to research and consider innovative delivery models and the mix of health professionals that would be required to ensure a quality health workforce under a non-traditional delivery model.

Identification of Issues

In order to establish a basis for the development of the 2005–2010 Texas State Health Plan (State Health Plan), an extensive assessment of issues concerning the health workforce was conducted. The SHCC chose to approach the next six-year planning cycle from two perspectives. First, they identified the most critical health workforce issue that remains unresolved from the previous six-year planning cycle: the current and anticipated future critical nursing shortage. The second perspective was to take a step back and consider a more macro or system approach to health care delivery and consider system change as a basis for health workforce planning. This document will discuss and propose possible solutions to the critical nursing shortage in the context of a greater need for system change in the delivery of health care.

The result of the year-long literature review supports the need for fundamental system change within the health care delivery system and the policy environment that shapes it. Major items in support of system change include the following:

Systemic shortcomings in health care quality;

- Soaring health care costs that include an increase in national health spending as a portion of gross domestic product that is expected to continue for the remainder of the decade;
- Increase in the incidence of chronic disease that will be exacerbated by the "baby boomers" coming of age and the obesity epidemic;
- Critical shortages and maldistribution of health professionals;
- Impact of terrorism on health workforce and on both the public and private health care systems;
- Increase in the number of underinsured and uninsured; and
- Disparities in health care access and quality, especially for racial and ethnic minorities.

The February 2004 issue of Governing summarizes the status of the American health care delivery system by stating that Americans are living with first-rate medicine and a third-rate health care system. This trend is expected to worsen. Innovation and creativity in medicine in the United States are being thwarted by federal and state health care systems incapable of delivering those improvements fairly and consistently to much of the American public. The drastic increase in the number of uninsured is a major factor in the crisis. The health care crisis in America is clearly a fiscal problem, with Medicaid being a huge contributor to the crisis. Texas ranked highest in state rankings for uninsured rates among children under age 19 as well as among adults under age 65 in 2001-02.1

Jordan J. Cohen, M.D., president of the Association of American Medical Colleges (AAMC) delivered the following statement at the AAMC Annual Meeting on November 9, 2003:

> Health care in America is in need of major overhaul. Wasteful inefficiencies continue to squander our limited resources; avoidable medical errors reflect our fragmented, un-systematic system and are threatening to undermine public support; inexplicable variations in the processes and outcomes of care are increasingly indefensible.2

Health care spending in the United States grew in 2002 by 9.3 percent over the previous year. This marked the sixth year of accelerating growth in health care expenditures. Health care spending now accounts for nearly 15 percent of the nation's gross domestic product. This is double the size of health care's share of the American economy 30 years ago and roughly doubles the amount spent in European countries.3

Demographics

Changes in the rates and sources of population growth, increases in the non-Anglo population, aging of the population, and change in the household composition of Texas families are major demographic trends that will affect the future of health care delivery in Texas. Using the U.S. Census count for 2000, 53.1 percent of the Texas population was Anglo, 11.6 percent was Black, 32.0 percent was Hispanic, and 3.3 percent was Other. Based on the Texas State Data Center's population projection 1.0, in 2040 those numbers will be 24.2 percent white Anglo, 7.9 percent non-Hispanic African-American, 59.1 percent Hispanic, and 8.8 percent others. 4

Although minority populations are growing at a tremendous pace, they remain seriously underrepresented in the health care professions. In Texas, while Hispanics constitute 32.0 percent of the population, they make up only 7.3 percent of registered nurses and only 11 percent of direct patient care physicians. Non-Hispanic African-Americans constitute 11.6 percent of the population, yet make up only 6.9 percent of registered nurses and 3.9 percent of direct patient care physicians.5

The Texas population of those over age 65 is expected to double from 2000 to 2030. Other sources project that this population will triple during this time frame. Health care for persons over 65 is commonly projected to cost three times as much as for those under 65. The aging of the population and the increase in the Hispanic population pose numerous implications for the incidence of chronic disease. It is well documented that treatment for chronic diseases is the most costly aspect of medical care. Some project that 90 percent of Medicare expenditures are spent for the management of chronic disease. At the same time, the incidence of chronic disease is increasing in all age groups due to the obesity epidemic.

Texas is the second-largest state in the United States and continues to be the second-fastest growing state in population. Currently, about 21.5 million people live in Texas. The Texas population is increasing at a rate roughly twice that of the nation as a whole and is second only to California in population growth. Texas has the distinction of having one of the fastest growing youth (18 and under) populations as well as one of the fastest growing aging populations (60 and over). Forecasts predict that the Texas population will reach 31.4 million by 2030.6 The projected rates of growth in the youth and elderly populations and in minority populations will result in increased demand for health services. This increase in demand and the special health care needs of these populations must be taken into consideration in the planning and preparation of the health care workforce.

Status of the Texas Health Workforce

Chapter 2 provides detailed information on health professions that are licensed in Texas. In addition to reporting the supply of health professionals practicing in Texas in 2003 for each of these professions, this report also shows the trends in the supply of the various providers over the last two decades, and compares those trends with the national trends. While these comparisons may not indicate whether or not Texas has a shortage of health professionals, they do show where the supply of health professionals in Texas is above or below the national average and whether the supply of those professionals in Texas, and the U.S., has been increasing or declining over the years. Additional information about the individual professions is provided in Appendix C. Most of the data are presented as ratios and reflect the number of providers per 100,000 population. This allows comparisons to be made between areas with different populations, such as the U.S. and Texas, or metropolitan counties and non-metropolitan counties. The provider-per-population ratio is a more accurate indicator of the supply of health providers in a given area than is the raw number of health providers. The higher the ratio, the greater the supply of health professionals available in an area for providing health care services.

Ratios are presented for Texas and the U.S., and for various geographic locations in Texas: metropolitan and non-metropolitan counties, border and non-border counties. The 43-county border area was defined by the state legislature and a map of this area is provided in Figure 2.1. The following is a summary of statistics presented in Chapter 2.

- Supply ratios vary according to geographic location:
 - Metropolitan county ratios are higher than non-metropolitan county ratios.
 - Non-border county ratios are higher than border county ratios.
 - Pharmacist ratios in non-metropolitan areas are decreasing more rapidly than pharmacist ratios in metropolitan areas.
- Over the past decade, Texas supply ratios have differed from U.S. average ratios as follows:
 - PC physician ratios in the U.S. have consistently exceeded the ratios of PC physicians in Texas; however, four years ago, the gap between the two began to widen. Metropolitan ratios are considerably larger than non-metropolitan ratios.
 - Supply ratios for pediatricians per 100,000 children and internal medicine physicians have been well below the U.S. supply ratios over the past 20 years.
 - Supply ratios for family practice physicians have been similar to U.S. ratios.

- Registered Nurse (R.N.) supply ratios in the U.S. have consistently exceeded the supply ratios in Texas for the past 20 years. Texas still lags behind the U.S., but the gap between the two has been narrowing in recent years.
- Licensed Vocational Nurse (L.V.N.) ratios in the U.S. have consistently been lower than the Texas ratios for the past 20 years. In contrast with R.N. ratios, L.V.N. ratios in non-metropolitan areas in Texas are higher than ratios in metropolitan ratios.
- Medical Radiologic Technician ratios were below U.S. average ratios between 1994 and 2001; however, since that time Texas ratios have been increasing faster than U.S. ratios.
- The ratios for most of the other Texas-licensed health professions are below the U.S. average ratios.
- Dentist supply ratios in the U.S. have consistently exceeded the supply ratios in Texas for the past 20 years and the numbers both in the U.S. and Texas have remained virtually flat since 1998.
- Pharmacist ratios in non-metropolitan areas have been lower than the ratios in metropolitan areas for over 20 years. This gap is widening and the supply of pharmacists in non-metropolitan areas appears to be decreasing more rapidly than the supply in metropolitan areas.
- Psychiatrist supply ratios have remained flat in Texas since 1998 and are lower than in 1992.

Some counties in Texas have been chronically short of various health professions; other counties have never had various types of professionals employed in their area and may not have the population to support those professions. L.V.N. is the most widespread profession throughout the state, with only three of 254 counties having no providers from this profession. In contrast, Certified Nurse-Midwife is the least widespread profession with 205 counties not having a representative from this profession.

As far as primary care providers are concerned, non-metropolitan areas have only 11 percent of the state's primary care physicians, but have 13.6 percent of the population. Metropolitan areas have 89 percent of the primary care physicians, but only 86.4 percent of the population. In addition, the growth rate of Nurse Practitioners (N.P.s) and Physician Assistants (P.A.s) in Texas has greatly exceeded the growth rate of primary care physicians. Some of that increased growth rate of P.A.s can be attributed to their increased growth rate in non-metropolitan areas, compared to the rate in metropolitan areas:

- N.P.s increased their supply ratios at a rate eight times faster than physicians (185 percent compared to 23 percent);
- P.A.s increased their supply ratios at a rate nine times faster than physicians (207 percent compared with 23 percent).

78th Legislative Session and Interim Period

During the 78th Legislative Session, there were numerous bills proposed that were identified as relating to the SHCC's recommendations on workforce in the 2003-2004 State Health Plan Update including telemedicine and telehealth, training for workers who care for the elderly, and health education incentives.

Several bills were filed that addressed the important subject of telemedicine and telehealth as a means to use technology to overcome the distances that many Texas residents must travel to see a health care provider. Of those bills, only Senate Bill 691, relating to the reimbursement for telemedicine medical services under the Medicaid program and other government-funded programs, passed.

Other bills identified as affecting the state's health workforce are as follows:

House Bill 85 — Relating to the establishment of an undergraduate medical academy at Prairie View A&M University.

House Bill 242 — Relating to career and technology education and training.

House Bill 411 — Relating to improvement of science instruction and student performance in public schools.

House Bill 727 — Relating to disease management programs for certain Medicaid recipients.

House Bill 1166 — Relating to the on-line information needs and requirements of licensing agencies and their license holders.

House Bill 1420 — Relating to the use of a portion of medical school tuition for student loan repayment assistance for physicians.

House Bill 1877 — Relating to creating the rural physician relief program.

House Bill 3193 — Relating to the delegation of certain acts by dentists. (Allows delegation by dentist only in medically underserved areas.)

Senate Bill 558 — Relating to immigration visa waivers for physicians.

Senate Bill 610 — Relating to Grants for Federally Qualified Health Centers.

Senate Bill 1549 — Relating to requiring that certain individuals who provide nursing services in a nursing institution receive annual training in caring for people with dementia.

Senate Bill 1642 — Relating to the establishment of a geriatric education and care research center at the University of Texas Health Science Center at Tyler.

Several additional bills passed during the 78th Regular Legislative Session have a direct impact on nursing in Texas.

> House Bill 1483 — Abolished the Board of Vocational Nurse Examiners and transferred the function of that agency to the Board of Nurse Examiners.

> House Bill 3126 - Increases nursing school enrollments through a number of measures. The bill also gives mission and funding to nursing data collection by creating a permanent Nursing Workforce Data Center. The center is located within the Texas Department of Health, Center for Health Statistics, Health Professions Resource Center (HPRC). The SHCC has oversight of the HPRC as part of their leadership role in Texas health workforce planning. The bill also added to the SHCC a member dedicated to the nursing profession.

> **Senate Bill 718** — Addresses a variety of issues to enhance the nursing workplace including expanded whistleblower protections for RNs raising patient care concerns, workplace safety, protection of title "nurse" and authorizing the Board of Nurse Examiners to conduct pilots designed to maximize reporting of system errors.

> **House Bill 1095** — Expands a physician's authority to delegate prescriptive authority to Advanced Practice Nurses to include Schedule III-V controlled substances. The bill also provides for standardized credentialing by facilities and insurers.

A tracking list of all health workforce-related bills that were introduced during the 78th Regular Texas Legislative Session is available in Appendix D.

Several charges from the Legislative Interim Committee relate to the health workforce:

House Committee on Appropriations — Evaluate all current funding streams for graduate medical education for financial viability and educational effectiveness in light of changes in Medicaid, managed care, and other cost factors, including the impact of uncompensated care. This evaluation shall include a review of the role of the state's teaching hospitals in the provision of indigent care and the role of graduate medical education in addressing health care needs of underserved regions of the state.

House Committee on Border and International Affairs — Identify areas of health care need that specifically affect the border region or that disproportionately affect the border region, and develop strategies to improve conditions and reduce demand on the health care system.

House Select Committee on Health Care Expenditures — Study the current consumer-directed care models that are in use by the state and look at other states' consumer-directed care models that may benefit Texas in areas such as long-term health care and chronic health care. Place emphasis on the Program of All-Inclusive Care for the Elderly model to ascertain its true potential for both cost-effectiveness and improved health outcomes. Identify barriers to the model's expansion in Texas.

Senate Higher Education Committee — Study and make recommendations on the proper role, scope, and mission of community colleges. Develop innovative approaches to incorporating the community college system into the delivery of K-16 education. Study the feasibility of allowing community college districts to expand their service areas for taxing purposes.

Senate Higher Education Committee — Review and make recommendations relating to the adequacy of funding for graduate medical education, including funding required for professors, facilities, research programs, and students. Review and make recommendations relating to increasing the number of health professionals.

Senate Joint Interim Charge to the Higher Education and Finance **Committees** — Study and make recommendations relating to the development of a statewide accountability system for higher education that is consistent with funding strategies for higher education. Study and make recommendations evaluating the cost of increasing the number of Tier 1 universities in Texas. Reexamine current and alternative methods of funding regional universities, community colleges, health science centers and their reimbursement for the provision of indigent health care, and universities.

Senate Government Organization — Study consolidation of certain licensing agencies or their administrative functions.

Senate Intergovernmental Relations - Study the unique challenges and opportunities in rural areas from an economic development standpoint. Study the future and unmet needs of rural communities, residents, and businesses and examine the quality of infrastructure, housing, health care, and community involvement. Make recommendations for promoting investment in growth industries in rural areas.

The House Appropriations Committee invited Ben G. Raimer, M.D., SHCC chair, to present expert testimony on their Interim Charge Six relating to graduate medical education at their committee hearing on March 23, 2004. Also, Dr. Raimer was invited to provide expert testimony at the Senate Higher Education Committee hearing on April 8, 2004, relating to their Interim Charge Five pertaining to studying graduate medical education and to increasing the number of health professionals.

In summary, the interim period since the previous State Health Plan Update has been busy. Several bills were enacted that respond to the issues addressed in the previous update and many more were considered that might be raised again during the 79th Legislative Session. In particular, the issue of establishing a fair and equitable process for determining changes in scopes of practice, while prominently considered in the 77th Regular Legislative Session, failed passage. Additionally, changes in the scope of practice that would improve access to care and services for medically underserved populations may again require consideration. The lack of access to dental care for numerous rural areas and medically underserved populations is a possible justification for considering changes in scope of practice that could result in improved access.

Other State Health Workforce Initiatives

Nursing Workforce Data Section and Nursing Workforce Data Advisory Committee

In response to the passage of House Bill 3126 from the 78th Regular Legislative Session, a Nursing Workforce Data Section (NWDS) within the Texas Department of Health, Center for Health Statistics was established in January 2004. A Nursing Workforce Data Advisory Committee (NWDAC) was added to the structure of the Statewide Health Coordinating Council and serves as a steering committee to review policy matters on the collection of data and reports, develop priorities and an operations plan for the NWDS, and review reports and information before dissemination. The funding for the Nursing Workforce Data Section and Nursing Workforce Advisory Committee comes from surcharges made on nurse license renewal fees (\$3 for R.N.s, \$2 for L.V.N.s).

The NWDS serves as a resource for data and research about educational and employment trends concerning the nursing workforce in Texas. One of the roles of the NWDS is coordination with other organizations (such as the Board of Nurse Examiners, the Texas Higher Education Coordinating Board, the Center for Health Economics and Policy, the Texas Nurses Association, the Texas Hospital Association, and regional health care organizations and educational councils) that gather nursing workforce data. The coordination is needed in order to avoid duplication of efforts in gathering data, to avoid overloading employers and educators with completing a large number of duplicative surveys, to share resources in the development and implementation of studies, and to establish better sources of data and methods for providing data to legislators, policy makers, and key stakeholders.

The NWDS is also implementing the Hospital Registered Nurse Staffing Study and the School of Nursing Capacity Study. The results of both studies should provide current and pertinent supply and demand trends on nursing workforce in Texas. In addition, a Demographics of the Nursing Workforce Texas - 2003 was developed and will be available for public distribution. This report includes supply trends, gender, age, and racial-ethnic data on R.N.s, Advanced Practice Nurses, Licensed Vocational Nurses, Certified Nurse Aides, Medication Aides, and Documented Midwives. Other demographic and data reports will be available on enrollment and graduation trends, characteristics of nursing faculty, and migration of Registered Nurses in and out of Texas.

In the future, a study will be done with qualified applicants who were unable to be admitted to nursing programs. The NWDS is also working with the Board of Nurse Examiners to establish an online system for deans and directors of nursing programs to enter information about their programs, students, and faculty in order that data can be collected and analyzed in a more efficient and effective manner.

Shared Vision Project

Recognizing the need to develop a shared vision of health and health care delivery for the state of Texas, the Texas Institute for Health Policy Research launched the Shared Vision for Health Care in Texas Project. To create this vision, the Institute is establishing a forum for dialogue among the leaders of Texas' health care providers, payers, and consumers for informed decision making. This collaborative effort is the only statewide effort that brings stakeholders together to provide leadership in developing innovative products and ideas to improve the state's access to health care and that care's quality and cost effectiveness.

As part of that process, the institute identified the following six focus areas: delivery systems, finance, information technology, workforce, rural issues, and community and public health issues. An expert workgroup was created for each of the focus areas. Recognizing that the SHCC has the statutory charge in Texas for making policy recommendations related to the health workforce, the Institute asked the SHCC to serve as the expert workgroup for the workforce area. The SHCC members approved this request in early 2004.

The SHCC and the Institute will co-host the first of the Shared Vision Policy Forums, a health workforce Legislative Policy Forum, on August 17, 2004 in Austin.

Texas Nurses Association's 2004 Redesign of Nursing Practice and Education

Another current initiative has the potential to greatly impact the status of nursing practice and policy in Texas. The Texas Nurses Association has initiated the 2004 Redesign of Nursing Practice and Education. Two task forces will host multiple stakeholders group meetings to review what reinvented models of nursing and education could look like. They will also attempt to define



what patients will need by 2007 in care planning and delivery, describe the best person to fill this need, identify collaborative imperatives in the new nurse practice model, and prioritize the environmental, legal, administrative, and regulatory changes that will be needed to support the new nursing practice model.

• Texas State Strategic Health Partnership

The Texas State Strategic Health Partnership (Partnership) is a group of public and private organizations convened by the Texas Commissioner of Health to identify priority goals to improve the health of Texans. Six of the goals focus on improving the health status of Texans and six goals focus on improving the public health system.

Two of the Partnership's public health system goals relate to the health workforce for Texas. Goal J states that by 2010, the public health system workforce will have the education and training to meet evolving public health needs. Goal L states that by 2010, the Texas public health system partners will be informed by, and make decisions based on, a statewide, real-time, standardized, integrated data collection and reporting system (s) for demographic, morbidity, mortality, and behavioral health indicators accessible at the local level, while at the same time protecting the privacy of Texans. The SHCC has voted to formally join the Partnership in support of Goals J and L.

• Texas Workforce Commission and Local Workforce Development Boards

The Texas Workforce Commission (Commission) and the Local Workforce Development Boards (Boards) serve as partners in Texas health workforce Development. In 2000, Governor Rick Perry named nursing as one of the state's three targeted occupations. The Commission and the Boards launched several initiatives across the state that focused on the nursing shortage. These initiatives included recruiting and training efforts using the Boards' formula funds, state discretionary funds, and the federal funds, notable federal H-1B grants).

Notes

- 1. Katherine Barrett, Richard Greene, and Michele Mariani, "A Case of Neglect: Why Health Care is Getting Worse, Even Though Medicine is Getting Better," Governing (February 2004), 22–24.
- 2. Jordan J. Cohen, "Our Quest for Meaning" (Association of American Medical Colleges President's Address 2003), quoted in press release, November 9, 2003.
- 3. Katherine Levit et al., "Trends: Health Spending Rebound Continues in 2002," Health Affairs 23:1 (January-February 2004), 147.
- 4. Steve H. Murdock, "Projected Proportion of Population by Race/Ethnicity in Texas, 2000-2040" (Texas State Data Center data), presentation to the SHCC, December 9, 2003.
- 5. Bryan King, Texas Department of Health, Center for Health Statistics, Health Professions Resource Center, e-mail communication to Connie Turney, February 6, 2004.
- 6. Texas State Data Center, Department of Rural Sociology, Texas A & M University, available online at http://txsdc.tamu.edu, Website Statistics.
- 7. Ibid.